

START

ENGINEERING CHANGE NOTICE

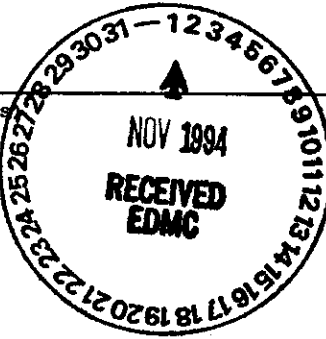
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1. ECN

614165

Proj.
ECN

PAGE

2. ECN Category (mark one) Supplemental <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Standby <input type="checkbox"/> Supersedeure <input type="checkbox"/> Cancel/Void <input type="checkbox"/>		3. Originator's Name, Organization, MSIN, and Telephone No. B. D. VALENZUELA, R2-12, 373-7232		4. Date 10-6-94	
		5. Project Title/No./Work Order No. TANK CHARACTERIZATION REPORT FOR SINGLE-SHELL TANK 241-T-107		6. Bldg./Sys./Fac. No. 2750E	
		8. Document Numbers Changed by this ECN (includes sheet no. and rev.) WHC-SD-WM-ER-382, REV. 0		9. Related ECN No(s). N/A	
11a. Modification Work <input type="checkbox"/> Yes (fill out Blk. 11b) <input checked="" type="checkbox"/> No (NA Blks. 11b, 11c, 11d)		11b. Work Package No. N/A		11c. Modification Work Complete N/A	
		11d. Restored to Original Condition (Temp. or Standby ECN only) N/A			
		Cog. Engineer Signature & Date		Cog. Engineer Signature & Date	
12. Description of Change Changed the unit for measuring radioactivity from Ci to kCi.					
13a. Justification (mark one) Criteria Change <input checked="" type="checkbox"/> Design Improvement <input type="checkbox"/> Environmental <input type="checkbox"/> As-Found <input type="checkbox"/> Facilitate Const. <input type="checkbox"/> Const. Error/Omission <input type="checkbox"/> Design Error/Omission <input type="checkbox"/>					
13b. Justification Details					
14. Distribution (include name, MSIN, and no. of copies) See Attached Distribution Sheet					
<div style="text-align: center;"></div> <div style="float: right; border: 1px solid black; padding: 5px;">RELEASE STAMP OFFICIAL RELEASE BY WHC DATE OCT 11 1994 Ato. 4</div>					

A-7900-013-3 (06/94) GEF096

SUPPORTING DOCUMENT		1. Total Pages 178 ^{80V} 179
2. Title Tank Characterization Report for Single-Shell Tank 241-T-107	3. Number WHC-SD-WM-ER-382	4. Rev No. 0A
5. Key Words Waste Characterization; Single-Shell Tank; T-107; Tank Characterization Report; Waste Inventory; T farm; TPA Milestone M-10; TPA Milestone M-44	6. Author Name: B. D. Valenzuela <i>Blandina Valenzuela 10/6/94</i> Signature Name: L. Jensen <i>L Jensen</i> Signature Organization/Charge Code 7L720/N4E54	
7. Abstract APPROVED FOR PUBLIC RELEASE This document provides the characterization information and interprets the data for Single-Shell Tank T-107		
<p>8. PURPOSE AND USE OF DOCUMENT This document was prepared for use within the U.S. Department of Energy and its contractors. It is to be used only to perform direct, or integrate work under U.S. Department of Energy contracts. This document is not approved for public release until reviewed.</p> <p>PATENT STATUS - This document copy, since it is transmitted in advance of patent clearance, is made available in confidence solely for use in performance of work under contracts with the U.S. Department of Energy. This document is not to be published nor its contents otherwise disseminated or used for purposes other than specified above before patent approval for such release or use has been secured, upon request, from the Patent Counsel, U.S. Department of Energy Field Office, Richland, WA.</p> <p>DISCLAIMER - This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of such use of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.</p>		<p>10. RELEASE STAMP</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>OFFICIAL RELEASE BY WHC</p> <p>DATE OCT 11 1994</p> <p><i>sto 4</i></p> </div>
9. Impact Level NA		

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TANK CHARACTERIZATION REPORT FOR SINGLE-SHELL TANK 241-T-107

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Table 5-23. Overall Data Summary and Inventory Estimates. (3 pages)

Analyte	Process History (Agnew 1994)	TRAC (Jungfleisch 1984)	Drainable Liquid Results (Avg.)	Average Core 51 and 52	Total Tank Inventory
Anions (continued)			$\mu\text{g/mL}$		
Nitrite (NO_2^-)	4,000	0	12,700	11,700	12,000
Phosphate (PO_4^-)	520,000	--	5,423	113,500	117,000
Sulfate (SO_4^-)	25,800	0.28	10,300	9,980	10,250
TOC	--	--	855	963	990
TIC	103	350	1,800	2,970	3,050
Radionuclides	$\mu\text{Ci/g}$	$\mu\text{Ci/g}$	$\mu\text{Ci/mL}$	$\mu\text{Ci/g}$	kCi
Americium-241	--	0.0019	0.000115	0.0141	0.0145
Carbon-14	--	0	0.000113	0.000181	0.00
Cesium-134	--	--	< 0.00027	< DL	--
Cesium-137	4.58	0	8.4	12.0	12.3
Cobalt-60	--	--	< 0.0012	< DL	--
Cerium/Praseodymium 144	--	--	< 0.00484	< DL	--
Europium-154	--	--	< 0.00411	< DL	--
Europium-155	--	--	< 0.0149	< DL	--
Iodine-129	--	0	< 0.000079	NA	--
Plutonium-239/240	0.40	0.053	< 0.0114	0.131	0.13
Plutonium-238	--	8.8e-05	< 0.0025	0.144	0.15
Potassium-40	0	--	0.00373	0.238	0.24
Ruthenium-103	--	--	< 7.26	< DL	--
Ruthenium/Rhodium-106	--	5.8e-09	< 0.0942	< DL	--
Strontium-90	6.27	38.9	0.038	108	110
Technetium-99	--	0	0.0225	--	--
Thorium 228/Lead	--	--	< 0.0021	< DL	--
Tritium-3 (H^3)	--	--	0.00257	0.00124	0.00
Total Alpha	--	--	0.006	0.434	0.45
Total Beta	--	--	11.75	330	340

P. Segall	H4-19	X
E. J. Shen	S4-58	X
B. C. Simpson (10)	R2-12	X
G. L. Smith	H4-61	X
M. J. Sutey	T4-07	X
L. D. Swenson	G3-20	X
J. D. Thomson	R2-76	X
G. L. Troyer	T6-50	X
D. A. Turner	S7-15	X
C. J. Udell	L6-12	X
D. J. Washenfelder	L4-75	X
M. S. Waters	S6-30	X
G. R. Wilson	S7-14	X
TFIC (Tank Farm Information Center)	R1-20	X
Central Files	L8-04	X
EDMC	H6-08	X